

Ouray National Wildlife Refuge Vegetation Mapping Project

V.A.5.N.1.6. *SCHOENOPLECTUS PUNGENS SEMIPERMANENTLY FLOODED HERBACEOUS ALLIANCE* Threesquare Semipermanently Flooded Herbaceous Alliance

Alliance Identifier: A.1433

Schoenoplectus pungens Herbaceous Vegetation

Threesquare Herbaceous Vegetation

Bulrush Wet Meadow

ELEMENT CONCEPT

GLOBAL SUMMARY: This bulrush wet meadow community is found in the western United States in the intermountain basins, as well as in western parts of the Great Plains. Stands are found along low-gradient, meandering, usually perennial streams and around the margins of ponds and marshes. *Schoenoplectus pungens* dominates the dense, 0.3- to 0.6-m tall herbaceous vegetation layer. Other species that often are present include *Schoenoplectus maritimus*, *Spartina gracilis*, *Hordeum jubatum*, *Pascopyrum smithii*, *Juncus balticus*, *Eleocharis palustris*, *Lemna minor*, *Sagittaria latifolia*, and *Typha* spp. Stands of this association contain no tree or shrub layer, but a few scattered trees and shrubs may be present, most commonly *Populus deltoides*, *Salix amygdaloides*, *Salix exigua*, *Symphoricarpos occidentalis*, or *Sarcobatus vermiculatus*. Substrates are generally dark, organic, fine-textured soils derived from alluvium.

ENVIRONMENTAL DESCRIPTION

USFWS WETLAND SYSTEM: PALUSTRINE

Ouray National Wildlife Refuge Environment: This stand of *Schoenoplectus pungens* Herbaceous Vegetation occurs as a narrow band along a *Typha latifolia* marsh, that extends onto adjacent land administered by the U. S. Bureau of Land Management. The soils are saturated clay and a slight odor of selenium is present.

Global Environment: Stands of this widespread association are found throughout much of the western U.S. in appropriate wetland habitat. Elevations range from 1000-2400 m. Stands occur along low-gradient, meandering, usually perennial streams, around the margins of ponds and marshes, in low-lying swales, and abandoned or overflow channels where the soils remain saturated. (Hansen et al. 1995, Kittel et al. 1999, Jones and Walford 1995, Walford 1996). It also occurs on silt and sand bars within the active channel. Soils are generally derived from alluvium and are fine-textured, black, alkaline, organic anoxic with gleying. Soils range from normal to saline with pH ranging from 7.4-9.1.

VEGETATION DESCRIPTION

Ouray National Wildlife Refuge Vegetation: This small stand of *Schoenoplectus pungens* Herbaceous Vegetation is very dense, providing approximately 90% foliar cover. Of this amount, *Schoenoplectus pungens* has foliar cover of approximately 50%, while the remainder results from *Schoenoplectus acutus*, *Distichlis spicata*, *Juncus balticus*, *Typha latifolia*, *Lepidium latifolium*, and *Sarcobatus vermiculatus*.

Global Vegetation: This widespread wetland association is characterized by a dense, 0.3- to 0.6-m tall herbaceous vegetation layer that is dominated by *Schoenoplectus pungens*. Associated species include *Schoenoplectus maritimus*, *Spartina gracilis*, *Hordeum jubatum*, *Pascopyrum smithii*, *Juncus balticus*, *Eleocharis palustris*, *Lemna minor*, *Sagittaria latifolia*, and *Typha* spp. Stands of this association contain no tree or shrub layer, but a few scattered trees and shrubs may be present, most commonly *Populus deltoides*, *Salix amygdaloides*, *Salix exigua*, *Symphoricarpos occidentalis*, or *Sarcobatus vermiculatus*.

Dynamics: Stands of this association are flooded in the spring (Larson 1993).

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MOST ABUNDANT SPECIES

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Stratum	Species
SHORT SHRUB	<i>Sarcobatus vermiculatus</i>
GRAMINOID	<i>Schoenoplectus pungens</i> , <i>Schoenoplectus acutus</i> , <i>Distichlis spicata</i> , <i>Juncus balticus</i>

Global

Stratum	Species
GRAMINOID	<i>Distichlis spicata</i> , <i>Schoenoplectus pungens</i>

CHARACTERISTIC SPECIES

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Species
Schoenoplectus pungens, *Schoenoplectus acutus*, *Distichlis spicata*

Global

Species
Schoenoplectus pungens

OTHER NOTEWORTHY SPECIES

Ouray National Wildlife Refuge

Stratum **Species**
N/A

Global

Stratum **Species**
N/A

GLOBAL SIMILAR ASSOCIATIONS:

Schoenoplectus americanus Western Herbaceous Vegetation (CEGL001841)--stands are dominated by *Schoenoplectus americanus* instead of *Schoenoplectus pungens*.

Spartina pectinata - *Schoenoplectus pungens* Herbaceous Vegetation (CEGL001478)--should probably be split into a *Spartina* type and a *Schoenoplectus pungens* type.

SYNONYMY:

Scirpus pungens habitat type (Hansen et al. 1995) B. includes vegetation dominated by all combinations of *Schoenoplectus pungens* and *S. americanus*.

Scirpus pungens series (MTNHP 1988) B. apparently includes a wider range of vegetation types than does this association.

Scirpus pungens Community (Jones and Walford 1995) . described from eastern Wyoming; synonymous

Scirpus pungens community (Walford 1996) . described from Wyoming's Bighorn Basin; synonymous

Scirpus pungens Herbaceous Vegetation (Kittel et al. 1999) . described from Wyoming's Bighorn Basin; synonymous

Scirpus pungens Monotype Community Type (Muldavin et al. 2000a) B. This association can be dominated by either *Schoenoplectus pungens* or *Schoenoplectus americanus*, which include *Scirpus olneyi*.

Scirpus pungens Association (Bundy et al. 1996) B. This association can be dominated by either *Schoenoplectus pungens* or *Schoenoplectus americanus*, which include *Scirpus olneyi*.

CLASSIFICATION COMMENTS

Ouray National Wildlife Refuge: N/A

Global Comments: Muldavin et al. (2000a) described 5 *Schoenoplectus pungens* community types from New Mexico. Most are codominated with an associated species listed in the vegetation description, e.g., *Eleocharis palustris*, *Distichlis spicata*, *Paspalum distichum*, and *Equisetum laevigatum*, with one being a *Schoenoplectus pungens* Monotype Community Type reported from the Gila River basin. Muldavin et al.'s (2000a) concept of this community type states that it can be dominated by *Schoenoplectus pungens* or *Schoenoplectus americanus* (= *Scirpus americanus*, = *Scirpus olneyi*). Hansen et al. (1995) also include *Schoenoplectus americanus* in their *Scirpus pungens* Habitat Type. This association needs further review to clarify whether to include stands where *Schoenoplectus*

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pungens is not the dominant species.

ELEMENT DISTRIBUTION

Ouray National Wildlife Refuge Range: One small patch of *Schoenoplectus pungens* Herbaceous Vegetation was observed in the large drainage near the northwestern boundary of the Refuge. *Schoenoplectus pungens* is only an occasional to rare associate of emergent wetlands within the Refuge.

Global Range: This community is found in the western United States in the intermountain basins, as well as in western parts of the Great Plains, from Montana south to Colorado, and west into Nevada, Utah, and Wyoming.

Nations: US

States/Provinces: CO KS MT ND NM NV SD UT WY

TNC Ecoregions: 10:C, 11:C, 19:C, 20:C, 26:C, 27:C

USFS Ecoregions: 331:C, 341B:CP, 341C:CC, 341E:CC, 342G:CC, M331H:CC

Federal Lands: USFWS (Ouray)

ELEMENT SOURCES

Identifier: CEGL001587 **Confidence:** 2 **Conservation Rank:** G3G4

REFERENCES: Brotherson and Barnes 1984, Gleason and Cronquist 1991, Great Plains Flora Association 1986, Hansen et al. 1991, Hansen et al. 1995, Jones and Walford 1995, Kittel and Lederer 1993, Kittel et al. 1994, Kittel et al. 1999, Larson 1993, Lauver et al. 1999, MTNHP 1988, Muldavin et al. 2000a, Von Loh 2000, Walford 1996.